PROJECT DESCRIPTION

I. GENERAL

This project involves the modification of the existing traffic control signal at the intersection of MD 210 (Indian Head Highway) and Livingston Road/Swan Creek Road in Prince George's County, Maryland. MD 210 is considered to run in a north/south direction.

II. INTERSECTION OPERATION

The intersection presently operates in a NEMA six (6) phase, full-traffic-actuated mode. There are exclusive left turn phases for both the north and southbound movements of MD 210. The MD 210 through movements operate concurrently. The Livingston Road/Swan Creek Road movements operate in a side street split mode.

The existing eight phase, full-traffic-actuated, solid state digital controller with intersection monitor and harness, battery back-up , and 4-channel rack mounted detction will be retocated to a new base mounted cabinet . Video camera detection equipment shall be installed.

The existing phasing shall remain.

EQUIPMENT LIST

A. Approved S.H.A. equipment to be purchased by the Developer and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
1	EA	818	12 in. x 32 ft. 2-ply steel strain pole
1	EA	816	Standard S.H.A. traffic signal base mounted cabinet with video detection equipment (Note: Cabinet shall be purchased from Econolite and delivered to the S.H.A. signal shop for wiring and testing. Contact Mr. Ed Rodenhizer (410) 787-7650).
4	EA	---	Video camera detection (To include four necessary cable for instalation) One cable at 400 ft., two cables at 250 ft., and one cable at 200 ft.
3	EA	814	12 in., one-way, three section (R,Y,G) adjustable traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, three section (RA,YA,GA) adjustable traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	814	12 in., one-way, four section (R,Y,G,GA) adjustable traffic signal head with span wire mounting hardware and tunnel visors.
2	EA	813	30 in. x 36 in. R 3-5(R) sign with span wire mounting hardware.
1	EA	813	30 in. x 36 in. R 3-5(L) sign with span wire mounting hardware.
1	EA	813	30 in. x 36 in. R 3-6(L) sign with span wire mounting hardware.
1	EA	813	30 in. x 30 in. R 1-1 sign for ground mounting.
2	EA	813	16 in. x 96 in. D-3(1) IDual Faced) sign with span wire mounting hardware.
8	EA	---	Non-invasive probe (set of 3) with 750 ft. lead-in cable.
1	EA	806	20 ft. luminaire arm.
1	EA	806	250 W H.P.S. lamp and luminaire.

B. Equipment to be furnished and installed by the Contractor. All equipment in this list shall have catalog cuts submitted for approval prior to installation.

Quantity	Units	Specification Section	Description
Lump Sum	LS	108	Mobilization.
Lump Sum	LS	104	Maintenance of traffic.
2	CY	205	Test pit excavation.
7	EA	811	Handhole.
340	LF	815	Sawcut for signal loop detector.
910	LF	810	Loop detector wire (No. 14 A.W.G.) encased in flexible tubing.
15	LF	810	1 in. liquid tight flexible conduit for detector sleeve.
400	LF	810	2 conductor tray cable (No.12 A.W.G.)
640	LF	810	2-conductor (aluminum shielded) electrical cable (No. 14 A.W.G.).
1400	LF	810	5-conductor electrical cable (No. 14 A.W.G.).
820	LF	810	7-conductor electrical cable (No. 14 A.W.G.).
50	LF	810	3-wire (No. 4 A.W.G.) electrical cable.
315	LF	810	3-M Opticom Detector cable.
40	LF	804	Bare copper stranded ground wire (No. 6 A.W.G.).
325	LF	819	⅜in. steel span wire.
270	LF	805	2 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
225	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit -bored.
25	LF	805	3 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
140	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - slotted in roadway.
25	LF	805	4 in. polyvinyl chloride (Schedule 80) electrical conduit - trenched.
5.90	CY	801	Concrete foundation for traffic signal equipment.
3	EA	804	Ground rod -⅝in. diameter x 10 ft. length.
1	EA	807	Control and distribution equipment (120/240 V, one phase, three wire system) for a type B-14 overhead electrical service.
205	EA	556	24 in. wide HAPPTPM - white for stop line.
2	EA	---	Temporary backguy.
18	LF	813	4 in. x 4 in. wood sign support.
Lump Sum	LS	---	Relocate existing opticom detectors and other signal equipment.
Lump Sum	LS	---	Remove existing traffic signal equipment.
Lump Sum	LS	---	Relocate existing interconnect cable (approx. 150 ft.).
Lump Sum	LS	---	As-built for S.H.A (on CADD).

C. Existing equipment to be removed by the Contractor and delivered to the MDSHA Office of Traffic and Safety, Traffic Operations Division, Traffic Signal Shop, 7491 Connelley Drive, Hanover MD, 21076. A twenty-four (24) hour notice is required prior to delivery. Please contact Mr. Ed Rodenhizer at (410) 787-7650.

Quantity	Units	Description
1	EA	Base mounted cabinet.

Note. All equipment and/or material not listed above shall become the property of the Contractor.

CONTACT LIST

The contact persons for District #3 are as follows:

Mr. Majid Shakib
Assistant District Engineer - Traffic
301-513-7300

Mr. Augie Rebish
Assistant District Engineer - Utility
301-513-7300

Mr. Randy Brown
Assistant District Engineer - Maintenance
301-513-7300

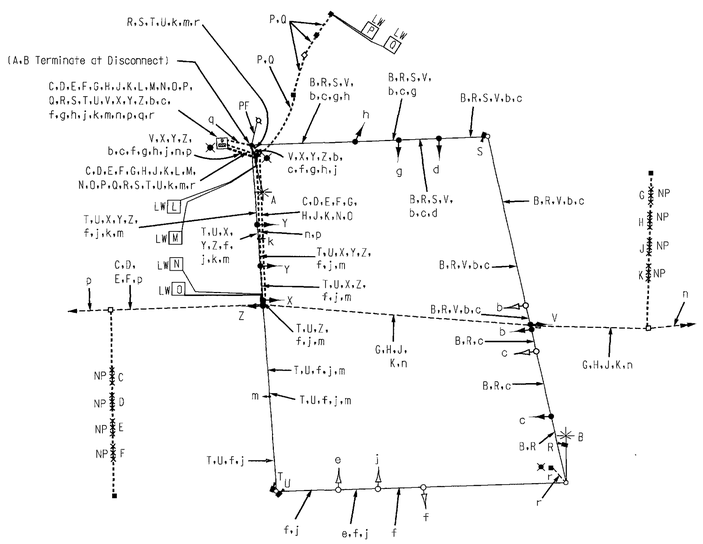
Mr. Richard L. Daff
Chief, Traffic Operations Division
410-787-7630

The Power Company Representative is:
Potomac Electricand Power Company
Mr. Ron Beeson
8300 Old Marlboro Pike
Upper Marlboro, Maryland 20722
301-670-8740

Phase Chart

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
Phase 1 & 5	G	G	R	R	G	C	G	R	R	R	R	R	R	R	R	
1 & 5 Change to Phase 1 & 6 or Phase 2 & 5 or Phase 2 & 6																
Phase 1 & 6	G	G	C	G	R	R	R	R	R	R	R	R	R	R	R	
1 Change	Y	Y	C	G	R	R	R	R	R	R	R	R	R	R	R	
Phase 2 & 5	R	R	R	R	G	G	G	G	G	R	R	R	R	R	R	
5 Change	R	R	R	R	Y	Y	Y	G	G	R	R	R	R	R	R	
Phase 2 & 6	R	R	G	G	R	R	R	G	G	R	R	R	R	R	R	
2 & 6 Change	R	R	Y	Y	R	R	R	Y	Y	R	R	R	R	R	R	
Phase 3	R	R	R	R	R	R	R	R	R	R	R	R	G	G	G	
3 Change	R	R	R	R	R	R	R	R	R	R	R	R	Y	Y	Y	
Phase 4	R	R	R	R	R	R	R	R	R	G	C	G	R	R	R	
4 Change	R	R	R	R	R	R	R	R	R	Y	Y	Y	R	R	R	
Flashing Operation	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	FL/R	FL/R	

Wiring Diagram



A, B } 2-Conductor Tray Cable (No. 12 A.W.G.)

C, G, D, H, E, J, F, K } Non- invasive Probe Lead-in

L, D, M, P, N, Q } 2-Conductor Cable (Aluminum Shielded)

R, S, T, U } Video Detection Cable

V, b, X, c, Y, d, Z, e } 5-Conductor Electrical Cable (No. 14 A.W.G.)

f, g, h, j } 7-Conductor Electrical Cable (No. 14 A.W.G.)

k, m } 4-Conductor 3-M Opticom Detector Cable (No. 20 A.W.G.)

n — Existing Interconnect Cable (Swan Creek- Old Fort Road Run)

p — Existing Interconnect Cable (Swan Creek- Fort Washington Road Run)

q — 3-Wire (No. 4 A.W.G.) for Traffic Signal Electrical Service

r — Bare Copper Ground Wire (No. 6 A.W.G.)

NP — Non-invasive Probe

LW — Loop Detector Wire (No. 14 A.W.G.) in Flexible Tubing

PF — Proposed Overhead Electrical Service By Pepco

— Proposed Grounding Rod

The Traffic Group
The Traffic Group, Inc.
410-931-6600
Fax: 410-931-6601

MARYLAND DOT - STATE HIGHWAY ADMINISTRATION
Office of Traffic & Safety
TRAFFIC ENGINEERING DESIGN DIVISION
(General Information Plan)
MD 210 (Indian Head Hwy.) at Livingston Rd./ Swan Creek Rd.

DRAWN BY: Frank Hoeckel	F.A.P. NO. N/A	TS NO. 1179F	SHEET NO.
CHECKED BY:	S.H.A. NO. BW996M82		
SCALE: N/A	COUNTY: Prince George's	T.I.M.S. NO. D-025	2 OF 2
DATE: April 18, 2002	LOG MILE: 160210007.77		

I:\1998\1980360\CES\option.dgn 04/18/2002